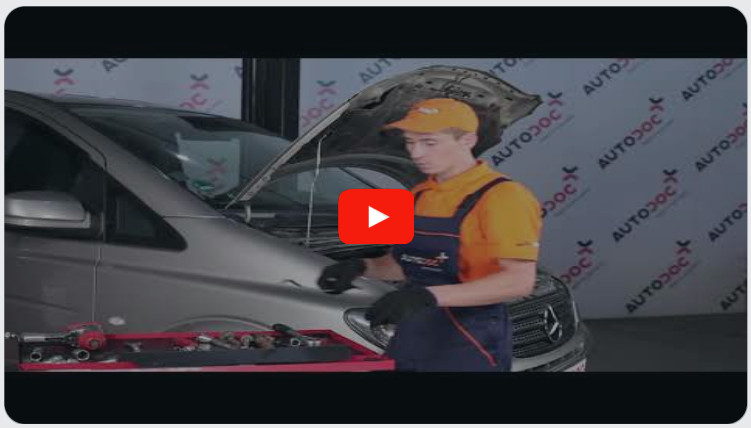
AUTODOC CLUB

How to change front suspension strut on **MERCEDES-BENZ VITO / MIXTO Box (W639)** – replacement guide

SIMILAR VIDEO TUTORIAL



This video shows the replacement procedure of a similar car part on another vehicle

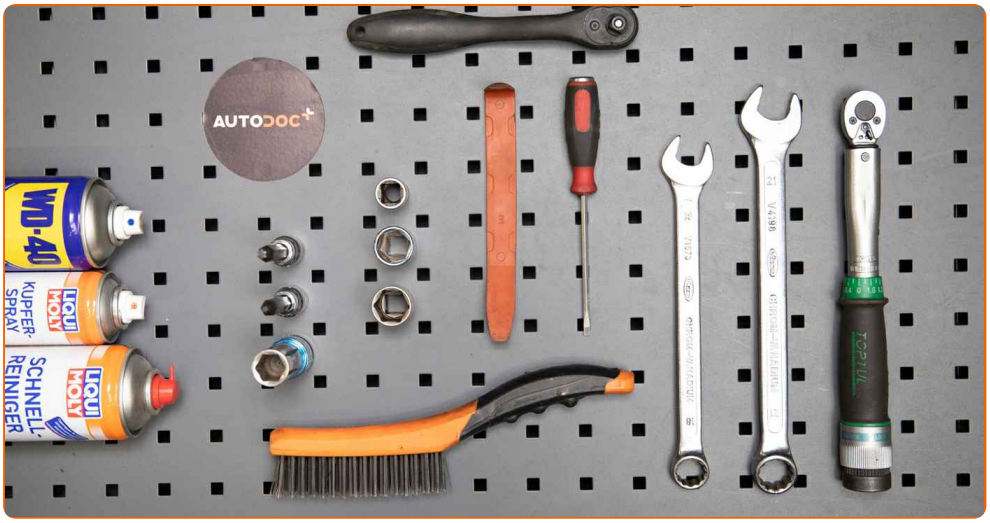
Important!

This replacement procedure can be used for: MERCEDES-BENZ VITO / MIXTO Box (W639) 115 CDI 2.2, MERCEDES-BENZ VITO / MIXTO Box (W639) 111 CDI 2.2, MERCEDES-BENZ VITO / MIXTO Box (W639) 119 3.2, MERCEDES-BENZ VITO / MIXTO Box (W639) 122 3.2, MERCEDES-BENZ VITO / MIXTO Box (W639) 109 CDI 2.2, MERCEDES-BENZ VITO / MIXTO Box (W639) 120 CDI 3.0, MERCEDES-BENZ VITO / MIXTO Box (W639) 126 3.5, MERCEDES-BENZ VITO / MIXTO Box (W639) 123 3.7 (639.603), MERCEDES-BENZ VITO / MIXTO Box (W639) 123 3.7

The steps may slightly vary depending on the car design.

This tutorial was created based on the replacement procedure for a similar car part on: MERCEDES-BENZ VITO Bus (W639) 115 CDI 2.2

REPLACEMENT: SUSPENSION STRUT – MERCEDES-BENZ VITO / MIXTO BOX (W639). LIST OF THE TOOLS YOU'LL NEED:



- Wire brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Torque wrench
- Torx bit T25
- Torx bit T40
- Combination spanner #18
- Combination spanner #21
- Drive socket # 13
- Drive socket # 20
- Drive socket # 21
- Wheel impact socket #17
- Ratchet wrench
- Flat Screwdriver
- Hydraulic strut spring compressor
- Ear clamp pliers
- Fender cover
- Wheel chock

Buy tools

Replacement: suspension strut – MERCEDES-BENZ VITO / MIXTO Box (W639). AUTODOC recommends:

- Both shock struts of the front suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right shock struts of the front suspension.
- All work should be done with the engine stopped.

REPLACEMENT: SUSPENSION STRUT – MERCEDES-BENZ VITO / MIXTO BOX (W639). RECOMMENDED SEQUENCE OF STEPS:

1 Secure the wheels with chocks.

2 Loosen the wheel mounting bolts. Use wheel impact socket #17.

3 Raise the front of the car and secure on supports.

4 Unscrew the wheel bolts.

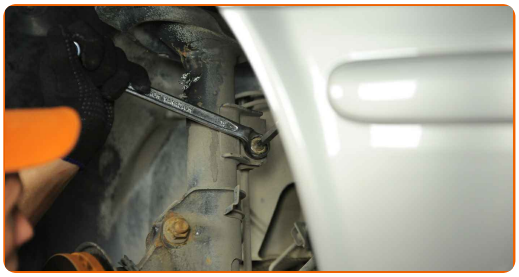
AUTODOC recommends:

- Important! Hold the wheel while unscrewing the fastening bolts. MERCEDES-BENZ VITO / MIXTO Box (W639)

5 Remove the wheel.

6 Clean the stabiliser link fasteners. Use a wire brush. Use WD-40 spray.

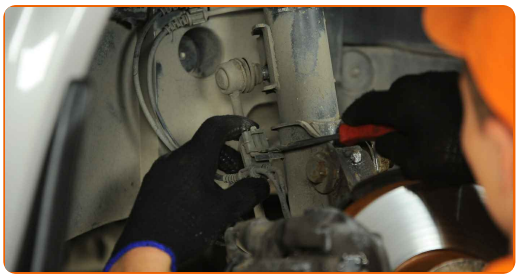
7 Unscrew the fastener connecting the stabilizer link to the shock strut. Use a combination spanner #18. Use Torx T40. Use a ratchet wrench.



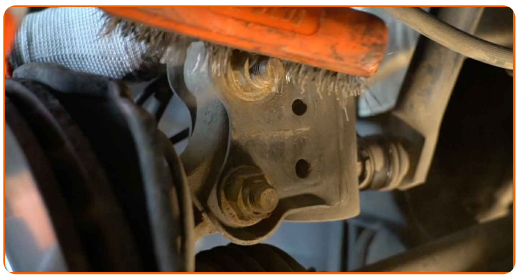
8 Remove the stabilizer rod.

9 Detach the brake hose from the shock strut. Use a flat screwdriver.

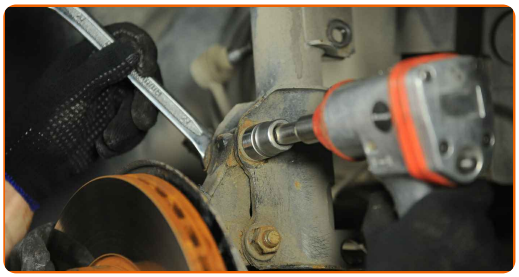
10 Disconnect the ABS sensor wiring. Disconnect the fastener of the brake pad wear sensor wire from the suspension strut. Use a flat screwdriver.



11 Clean the fasteners connecting the shock strut to the steering knuckle. Use a wire brush. Use WD-40 spray.



12 Unscrew the fasteners connecting the suspension strut to the steering knuckle. Use a combination spanner #21. Use a drive socket #21. Use a ratchet wrench.



13 Remove the fastening bolts.

14 Disconnect the steering knuckle from the shock absorber strut.

15 Lower the car.

16 Open the bonnet.

17 Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.

18 Unscrew the fasteners of the cowl grille. Use Torx T25. Use a ratchet wrench.

19 Remove the clips of the plastic cowl grille. Use a flat screwdriver. Use ear clamp pliers.

20 Unscrew the fasteners of the windscreen wiper arms. Use a drive socket #13. Use a ratchet wrench.

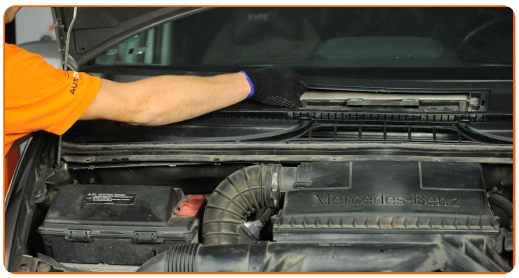
21 Remove the wiper arms.

22 Detach the windscreen washer nozzle hose.

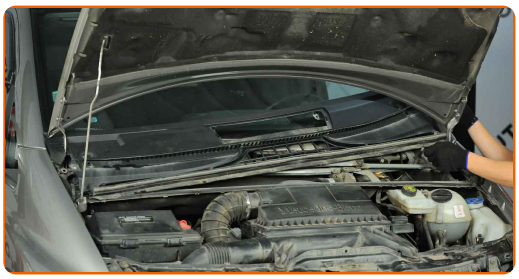
23 Raise up and remove the cowl grille. Use a flat screwdriver.

24 Take out the cabin filter bracket. Use Torx T25. Use a ratchet wrench.

25 Remove the lower wiper plastic cowl grille.

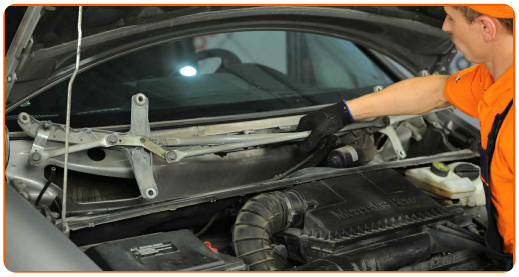


26 Detach the windscreen washer nozzle hose.

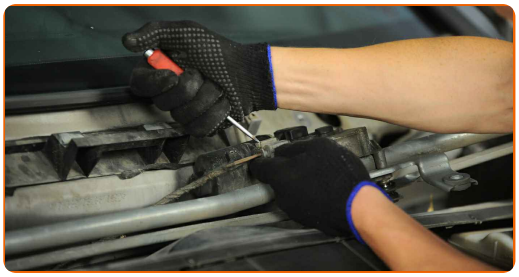


27 Unscrew the fasteners of the windscreen wiper linkage panel. Use a drive socket #13. Use a ratchet wrench.

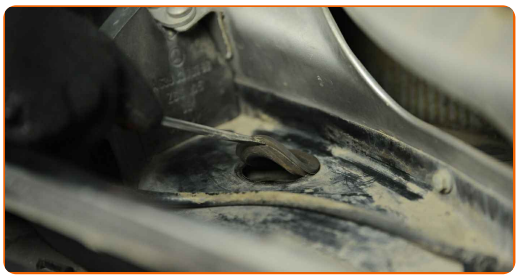
28 Remove the panel assembled with the windscreen wiper linkage.



29 Unplug the wiper motor connector. Use a flat screwdriver.



30 Remove the suspension strut mount cap. Use a flat screwdriver.



31 Clean the upper fastener of the suspension strut mount. Use a wire brush. Use WD-40 spray.

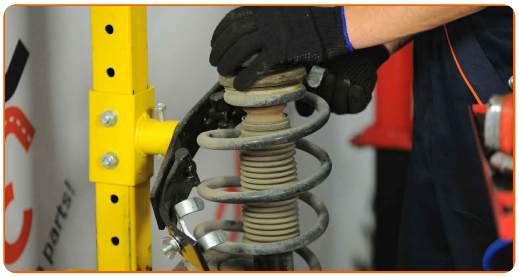
32 Unscrew the top fastening of the shock strut mount. Use a drive socket #21. Use a ratchet wrench.

Replacement: suspension strut – MERCEDES-BENZ VITO / MIXTO Box (W639). Tip:

- To avoid injuries, hold the shock strut when undoing the fastening bolts.

33 Remove the suspension strut.

34 Set the shock absorber strut on the spring compressor tool.



Replacement: suspension strut – MERCEDES-BENZ VITO / MIXTO Box (W639). Tip from AUTODOC experts:

- Note that when using a spring compressor, spring coils need to be securely gripped, compressing the spring on the opposite sides.
- Ensure the correct position of the spring in the retainer.
- Make sure that the spring coils tightly entered the lock handles.

35 Compress the spring.

36 Treat the shock strut rod. Use WD-40 spray.

37 Remove the strut piston rod nut. Use a drive socket #20. Use a ratchet wrench.

38 Remove the shock absorber mount, dust boot, and bump stop.

AUTODOC recommends:

- Replacement: suspension strut – MERCEDES-BENZ VITO / MIXTO Box (W639). Carefully inspect the mount, the boot, and the bump stop of the shock absorber. Replace if necessary.

39 Release the coil spring.

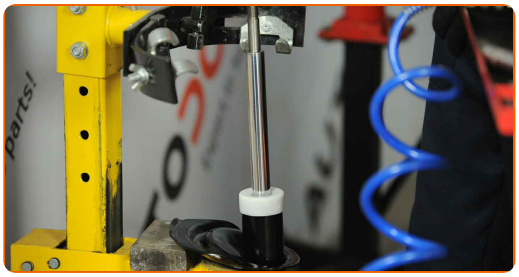
40 Remove the spring.

41 Remove the old shock absorber from the hydraulic coil spring compressor.

Replacement: suspension strut – MERCEDES-BENZ VITO / MIXTO Box (W639). Tip from AUTODOC:

- Before installing a new shock absorber you should pump it manually 3-5 times.

42 Install the new shock absorber on the hydraulic coil spring compressor.



43 Install the spring on the shock absorber.

44 Install the mount, dust boot, and bump stop on a new shock absorber.

45 Compress the spring.

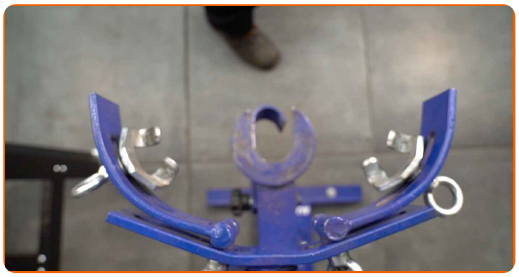
46 Tighten the shock strut piston rod nut. Use a drive socket #20. Use a torque wrench. Tighten it to 56 Nm torque.

Replacement: suspension strut – MERCEDES-BENZ VITO / MIXTO Box (W639). AUTODOC experts recommend:

- Check to make sure the spring is positioned correctly. Avoid its misalignment.

47 Decompress the spring.

48 Remove the assembled shock strut.



49 Install the shock strut into the wheel arch.

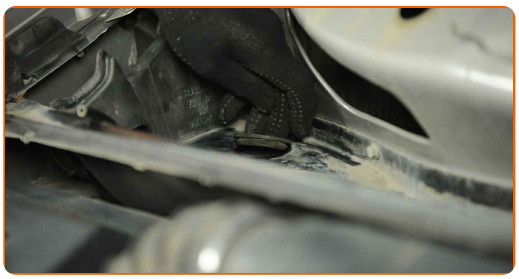
50 Screw the top fastening of the shock strut mount.

AUTODOC recommends:

- Important! Hold the suspension strut while screwing in the fastening bolts. MERCEDES-BENZ VITO / MIXTO Box (W639)

51 Tighten the upper fastener of the shock absorber strut mount. Use a drive socket #21. Use a torque wrench. Tighten it to 56 Nm torque.

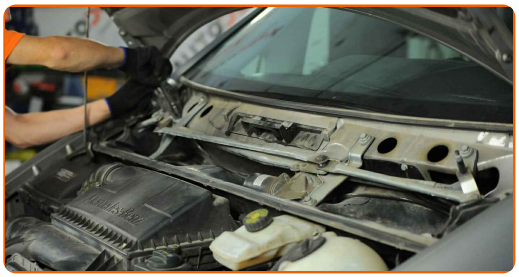
52 Install the shock strut mount cap.



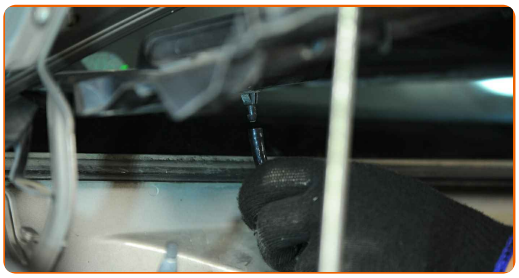
53 Plug in the wiper motor connector.

54 Install the panel assembled with the windscreen wiper linkage.

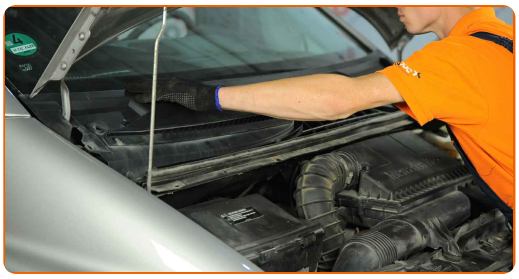
55 Screw in the fasteners of the windscreen wiper linkage panel. Use a drive socket #13. Use a torque wrench. Tighten it to 27 Nm torque.



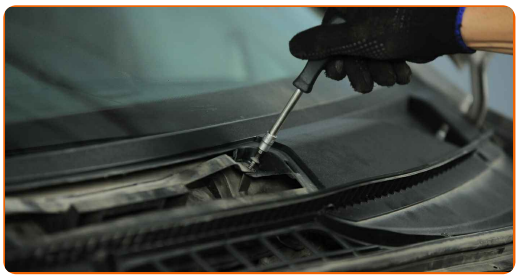
56 Attach the windscreen washer nozzle hose.



57 Install and secure the cowl grille.

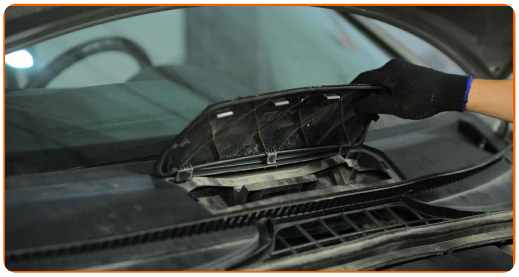


58 Install the cabin filter bracket. Use Torx T25. Use a torque wrench. Tighten it to 11 Nm torque.

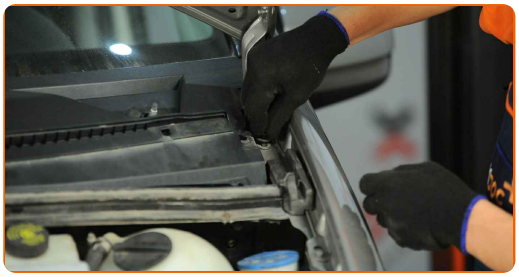


59 Tighten the fasteners of the cowl grille. Use Torx T25. Use a ratchet wrench.

60 Install and secure the cowl grille.



61 Install the fasteners of the wiper plastic cowl grille.



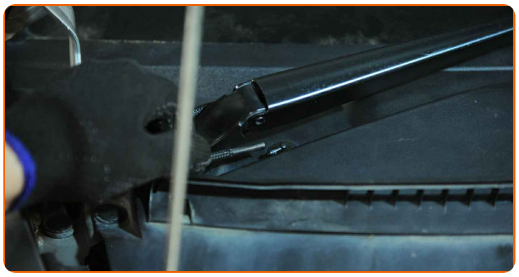
62 Reinstall the wiper arms.

63 Tighten the fasteners of the wiper arms. Use a drive socket #13. Use a torque wrench. Tighten it to 24 Nm torque.

Replacement: suspension strut – MERCEDES-BENZ VITO / MIXTO Box (W639). Tip from AUTODOC experts:

- Make sure not to mix up the wiper arms on the driver's and passenger's sides.

64 Attach the windscreen washer nozzle hose.



65 Remove the fender protection cover.

66 Close the hood.

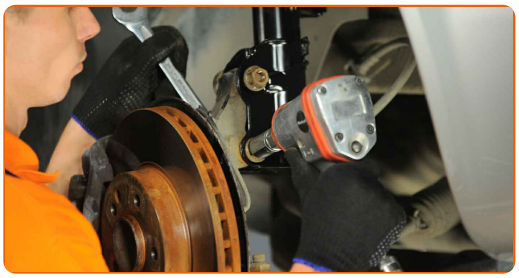
67 Raise the front of the car and secure on supports.

68 Treat the shock strut mounting seat on the steering knuckle. Use a wire brush. Use WD-40 spray.

69 Fix the shock absorber strut on the steering knuckle.

70 Install the fastening bolts.

71 Tighten the lower fasteners connecting the shock strut to the steering knuckle. Use a combination spanner #21. Use a drive socket #21. Use a torque wrench. Tighten it to 120 Nm torque.+75°

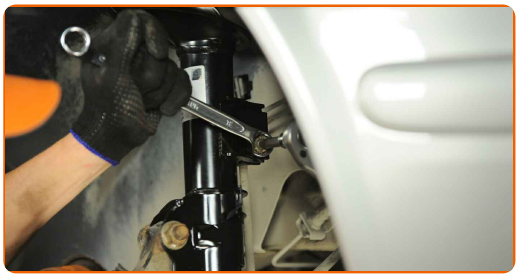


AUTODOC recommends:

- Important! Be sure to use new fasteners.

72 Secure the stabilizer link on the suspension strut.

73 Tighten the fastener connecting the stabilizer link to the shock strut. Use a combination spanner #18. Use Torx T40. Use a torque wrench. Tighten it to 85 Nm torque.

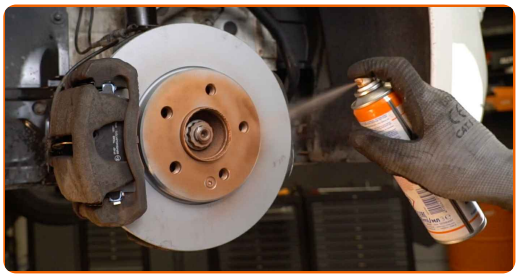


74 Fasten the brake hose on the strut. Use a flat screwdriver.

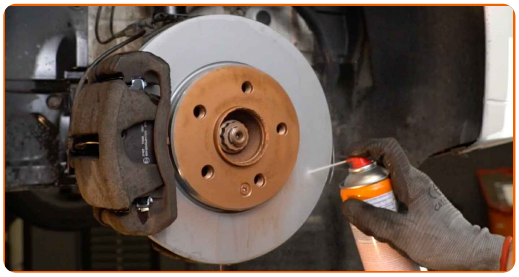
75 Connect the fastener of the ABS sensor cable to the shock absorber strut. Connect the fastener of the brake pad wear sensor wire to the suspension strut.

76 Treat the shock strut fasteners. Treat all joints of the stabiliser link. Use copper grease.

77 Treat the surface where the brake disc contacts the wheel rim. Use copper grease.



78 Clean the brake disk surface. Use a brake cleaner.



Replacement: suspension strut – MERCEDES-BENZ VITO / MIXTO Box (W639). Tip:

- After applying the spray, wait a few minutes.

79 Install the wheel.

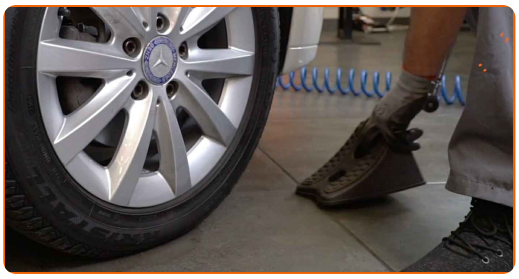
Replacement: suspension strut – MERCEDES-BENZ VITO / MIXTO Box (W639). Tip from AUTODOC:

- To avoid injury, hold up the wheel when screwing in the fastening bolts.

80 Screw in the wheel bolts. Use wheel impact socket #17.

81 Lower the car and working in a cross order, tighten the wheel bolts. Use wheel impact socket #17. Use a torque wrench. Tighten it to 130 Nm torque.

82 Remove the jacks and chocks.



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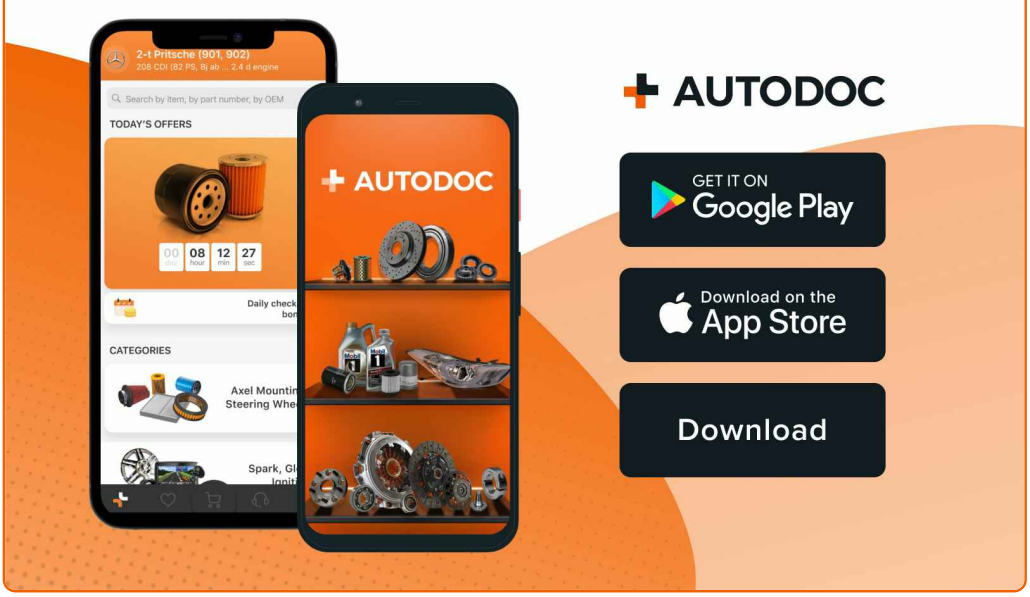

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